

## Pharmacology exam for MSc for cardiology

Tanta University

Pharmacology Written Examination

Faculty of Medicine

Number of Questions: 4

Pharmacology Department

Time Allowed: 3Hour

Date: 28/2/2022

Total: 30 Marks



**All questions must be answered.**

**1- Give an account on the following (6 marks):**

**a-Angiotensin converting enzyme inhibitors(ACEIs)?**

**Mechanism of action ,uses and contraindications.**

**b- Phosphodiastase inhibitors(PDEI):classification,dynamics and uses?**

**2- Discuss the lines of treatment of the following (6marks):**

**a-Prenteral antihypertensive agents for Hypertensive Emergency?**

**b-Treatment of heart failure?**

**3- Give reason (3 marks):**

**a- High doses of heparin may be needed with erythropoietin therapy.**

**b- -Dopamine is useful in many types of shock.**

**c--Dialysis is not effective in drug toxicity with high Vd.**

**4-Mcqs (15 marks):**

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**1-Which of the following antiplatelet drugs is a prodrug?**

- (a) Clopidogrel
- (b) Tirofiban
- (c) Aspirin
- (d) Dipyridamole.

**2- Maintenance dose rate of a drug depends primarily on:**

- (a) Volume of distribution
- (b) Half life
- (c) Lipid solubility
- (d) Total body clearance

**3-Which is True about dobutamine?**

- (a) Dobutamine decreases peripheral resistance
- (b) Acts on D1 and D2 receptors
- (c) Decrease kidney circulation
- (d) Has no effect on coronary circulation.

**4- Intravenous administration of norepinephrine in a patient already taking an effective dose of atropine will often:**

- (a) Increase heart rate
- (b) Decrease total peripheral resistance
- (c) Decrease pupil size
- (d) Has no effect on cardiovascular system .

**5-Beta blocker with peripheral vasodilator action is:**

- (a) Propranolol
- (b) Carvedilol
- (c) Atenolol
- (d) Acebutolo.

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6-The positive inotropic effect of digitalis is due to inhibition of  $\text{Na}^+/\text{K}^+$  ATPase pump in cardiac muscle cell membrane leading to:

- (a) Decreased activity of  $\text{Na}^+/\text{Ca}^{++}$  exchanger causing decreased influx of sodium and decreased efflux of  $\text{Ca}^{++}$  in the sarcolemma
- (b) Decreased efflux of  $\text{Na}^+$  leading to less negative resting membrane potential and opening of voltage gated  $\text{Ca}^{++}$  channels on the T tubules
- (c) Increased intracellular  $\text{Na}^+$  causing increased efflux of  $\text{Na}^+$  and increased influx of  $\text{Ca}^{++}$  through  $\text{Na}^+/\text{Ca}^{++}$  exchanger in the sarcolemma
- (d) Increased intracellular  $\text{Na}^+$  decreasing the activity of  $\text{Ca}^{++}$  pump in the sarcoplasmic reticulum .

7-. Coronary steal phenomenon is seen with:

- (a) Dipyridamole
- (b) Diltiazem
- (c) Propanolol
- (d) Verapamil.

8- The drug effective for treatment as well as prophylaxis of angina pectoris is:

- (a) Isosorbide dinitrate
- (b) Pentaerythritol tetranitrate
- (c) Diltiazem
- (d) Dipyridamole.

9-Nitroglycerine exerts beneficial effects in variant angina primarily by:

- (a) Coronary vasodilation
- (b) Decreased ventricular contractility
- (c) Reduction of cardiac preload
- (d) Reduction of cardiac afterload.

## Pharmacology exam for MSc for cardiology

10-. Drug of choice for supraventricular tachycardia is:

- (a) Verapamil
- (b) Diltiazem
- (c) Digoxin
- (d) Phenytoin .

11-All of the following drugs can be used for the chronic oral treatment of arrhythmia except:

- (a) Amiodarone
- (b) Esmolol
- (c) Quinidine
- (d) Verapamil.

12-Which of the following is wrongly matched combination of anti-arrhythmic drugs and their class:

- (a) Mexiletine-IB
- (b) Verapamil-IV
- (c) Amiodarone-III
- (d) Lignocaine-IA .

13-.Severe cases of bleeding due to fibrinolytic agents are treated with

- (a) Aspirin
- (b) Heparin
- (c) EACA (Epsilon Amino Caproic Acid)
- (d) Vitamin K .

14. Thrombolytic therapy instituted within 3- 6 hours of onset of acute myocardial infarction affords the following benefit(s)

- (a) Reduces mortality
- (b) Reduces area of myocardial necrosis
- (c) Preserves ventricular function
- (d) All of these-



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**15-. Low molecular weight heparins differ from conventional heparin in that**

- (a) They selectively inhibit factor Xa**
- (b) They do not significantly prolong clotting time**
- (c) They are metabolized slowly and have longer duration of action**
- (d) All of the above.**

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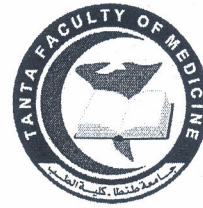
**Oral exam will be in 28/2/2022 after written exam at 1 PM in the pharmacology department**

## Master Exam in Cardiology

Course Title: CARD 8003

Date: 23/2/2022

Total assessment marks: 30 marks



1- Give an account on Endocarditis (etiology, pathogenesis, pathological features and complications).

(10 marks)

2- Mention: types, causes and effects of cardiomyopathy.

(10 marks)

3- Give an account on:

- Haemangioma
- Embolism

(5 marks)

(5 marks)

**GOOD LUCK**

Oral exam will held be on Monday 28/2/2022

Tanta University

Cardiology Master Degree (2015 Policy)

Faculty of Medicine

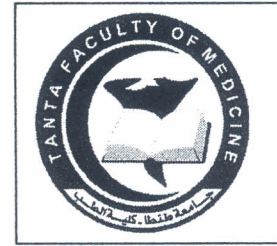
Number of Questions: 5 (Total 30 Marks)

Department of Cardiology

Time Allowed: 3 Hours

February 21<sup>st</sup>, 2022

First Part (Semester Two, Basic Cardiology)



## Basic Cardiology

**All Question should be Answered (Each Question 6 Marks):**

1. Indication and contraindication of exercise treadmill test.
2. Waves of neck veins.
3. ECG criteria of conduction defects.
4. Non high Density Lipoprotein.
5. Regulation of blood pressure.

Good luck

**Exam of Medical Biochemistry for Master Degree of Cardiology (first part)**

**C- Choose the correct answer:**

<b>1- The lipoprotein with the fastest electrophoretic mobility and the lowest triglyceride content is</b> (A) Chylomicron (B) VLDL (C) IDL (D) HDL	<b>2- The apolipoprotein which from the integral component of VLDL is</b> (A) B-100 (B) B-48 (C) A (D) D
<b>3- Serum LDL has been found to be increased in</b> (A) Obstructive jaundice (B) Hepatic jaundice (C) Hemolytic jaundice (D) Malabsorption syndrome	<b>4- A lipoprotein inversely related to the incidence of coronary atherosclerosis is</b> (A) VLDL (B) IDL (C) LDL (D) HDL
<b>5- Lovastatin is a</b> (A) Competitive inhibitor of acetyl CoA carboxylase (B) Competitive inhibitor of HMG CoA synthetase (C) Non-competitive inhibitor of HMG CoA reductase (D) Competitive inhibitor of HMG CoA reductase	<b>6- The lipoprotein richest in cholesterol is</b> (A) Chylomicrons (B) VLDL (C) LDL (D) HDL

**D- Answer all of the following questions:**

- 1. Regulation of cholesterol biosynthesis?**
- 2. LDL-C / HDL-C Ratio and coronary artery diseases?**
- 3. Ischemia modified albumin as markers of myocardial infarction?**

Good luck and best wishes

الامتحان الشفوي يوم السبت الموافق 2022\2\19

الساعة الواحدة بالقسم مع الالتزام بكافة الاجراءات الاحترازية





Department of physiology  
Time allowed: Three hours  
Total marks: 30

Physiology  
MSC of Cardiology

Tanta University  
Faculty of Medicine  
Code: CARD 8002  
Date: 19/ 2 /2022

**All the questions must be answered:**

- 1- Discuss: Pathophysiological changes occurring with heart failure . (10 marks)
- 2- State : Factors affecting pulse pressure . (5marks)

**All the following must be answered by only one choice (15 marks)**

- 1- During rest stroke volume normally equal :
  - a. 40 ml.
  - b. 20 ml.
  - c. 30 ml.
  - d. 80 ml.
- 2- Histotoxic hypoxia is characterized by :
  - a. Normal arterial oxygen tension and oxygen content.
  - b. Decrease arterial oxygen tension and oxygen content.
  - c. Increase arterial oxygen tension and oxygen content.
  - d. Caused by CO poisoning.
- 3- Which of the following decrease capillary permeability :
  - a. Acidosis.
  - b. Hypoxia .
  - c. Alkali.
  - d. Capillary dilatation.
- 4- Which of the following is function of vitamin K:
  - a. Antiprothrombin.
  - b. Antithrombin .
  - c. Help prothrombin formation.
  - d. Activation to factor XII.
- 5- Stimulation of nicotinic receptors induce:
  - a. Pupil constriction.
  - b. Increase catecholamine secretion.
  - c. Decrease heart rate.
  - d. Decrease cardiac contraction.
- 6- Physiological response to cold environment include:
  - a. Cutaneous vasodilataion.
  - b. Increase secretion of thyroxine.
  - c. Decrease muscle tone
  - d. increase aldosterone secretion.
- 7- Blood group O is characterized by :
  - a. Presence of A and B agglutigen on RBCs.
  - b. Absence of A and B agglutigen on RBCs.
  - c. Universal recipient.
  - d. Absence of agglutinin in plasma.

**Look to back**

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8- Pain sensation is characterized by which of the following :

- a. Its receptors are rapidly adapted .
- b. Its receptors are moderately adapted.
- c. Its receptors are free nerve endings.
- d. Carried by dorsal column of the spinal cord.

9- Glucocorticoids could decrease blood level of :

- a. Free fatty acids.
- b. Glucose.
- c. Eosinophils.
- d. RBCs.

10- Which of the following is CORRECT regarding referred pain :

- a. Could explained by dorsal root branching mechanism.
- b. Could explained by convergence facilitation mechanism.
- c. Never occur with visceral pain.
- d. Always occur with cutaneous pain.

11- Which of the following could increase heart rate:

- a. Stimulation to beta 1 adrenergic receptors.
- b. Venodilatation.
- c. Stimulation to muscarinic receptors.
- d. Stimulation to arterial baroreceptors.

12- Intrinsic mechanism of blood coagulation is initiated by:

- a. Contact with rough surface.
- b. Injury to blood vessels.
- c. Activation of factor X.
- d. Activation of factor VII.

13- Vasodilatation of arterioles could induce :

- a. Increase peripheral vascular resistance.
- b. Decrease venous return.
- c. Decrease central venous pressure.
- d. Decrease peripheral vascular resistance .

14- Which of the following could induce respiratory alkalosis:

- a. Restrictive lung disease.
- b. Renal failure.
- c. Hypoventilation.
- d. Hyperventilation.

15- Which of the following is CORRECT as regard blood PH:

- a. Inversely proportionate with arterial  $\text{HCO}_3^-$ .
- b. Directly proportionate with arterial  $\text{PCO}_2$ .
- c. Directly proportionate with arterial  $\text{HCO}_3^-$ .
- d. Normally equal 7.1 for arterial blood.

إمتحان الشفهي يوم الثلاثاء 2022/3/ 1 في قسم الفسيولوجي التاسعة صباحا